

Applicant Name	Montana Department of Natural Resources and Conservation (DNRC), Water Resources Division (WRD)
Project Name	Ackley Lake Dam Rehabilitation

Project Abstract

The Ackley Lake Dam is approximately 10 miles southwest of Hobson. The dam is owned by the DNRC, with daily operations and maintenance the responsibility of the Ackley Lake Water Users Association. The dam and canal system were constructed by the State Water Conservation Board in 1938. Water from the reservoir is used for irrigation, recreation, and regulation of streamflows. The reservoir storage capacity at the dam crest elevation is 8,315 acre-feet. Surface area at normal full pool is 260 acres. The drainage area covers 2.6 square miles. Ackley Lake State Park surrounds most of the reservoir and is a popular recreation area, with fishing the most common activity.

The earthen embankment dam is 51 feet high and 3,514 feet long. The reservoir stores 5,975 acre-feet at the spillway crest. The dam is classified "high hazard" under the Montana Dam Safety Act guidelines because of the potential for loss of life below the dam, should failure occur.

A feasibility study for Ackley Lake Dam was prepared in 2006 to present designs, design options, and costs for rehabilitating the existing seepage control measures and outlet conduit of the dam. In the toe area of the dam, artesian pressures have been measured that are well below applicable safety standards. Both the original drains and outlet conduit were constructed with metal pipe with corrosion protection (galvanized and tar coating). However, given the age of the project, these pipes are probably nearing the end of their design life.

Project rehabilitation will consist of installation of new drains and a toe berm to control the seepage and construction of a new outlet conduit to replace the existing, deteriorating structure. Repair work and improvements will enhance dam safety and longevity and promote effective water conservation for irrigation needs, recreation, and fisheries enhancement.

The funding in this request would be used to help pay for rehabilitation construction costs. The DNRC WRD is requesting a grant in the amount of \$100,000 and a loan in the amount of \$200,000 from the Renewable Resource Grant and Loan Program (RRGL) to contribute to the overall project. Additional funding sources include a \$1,132,486 Executive Planning Process (EPP) budget request from the Water Storage and Hydropower Account and approximately \$87,257 from the DNRC in-kind contributions. Estimated total cost of the project at the feasibility stage is approximately \$1,519,743.